

FILE 'USPATFULL' ENTERED AT 11:07:55 ON 05 MAR 2007.

E WHITCOMB JEANNETTE/IN

L1 15 S E3 OR E4
L2 11 S L1 AND (NNRTI OR NONNUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITO
L3 3 S L2 AND (CODON 190/CLM)
L4 50446 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L5 876 S L4 AND (NNRTI? OR NONNUCLEOSIDE REVERSE TRANSCRIPTASE INHIBIT
L6 8 S L5 AND (CODON 190/CLM OR G190S/CLM OR G190A/CLM)
L7 5 S L6 NOT L3

FILE 'WPIDS' ENTERED AT 11:11:28 ON 05 MAR 2007

L8 24802 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L9 72 S L8 AND (NNRTI? OR NONNUCLEOSIDE REVERSE TRANSCRIPTASE INHIBIT
L10 5 S L9 AND (CODON 190 OR G190A OR G190S)

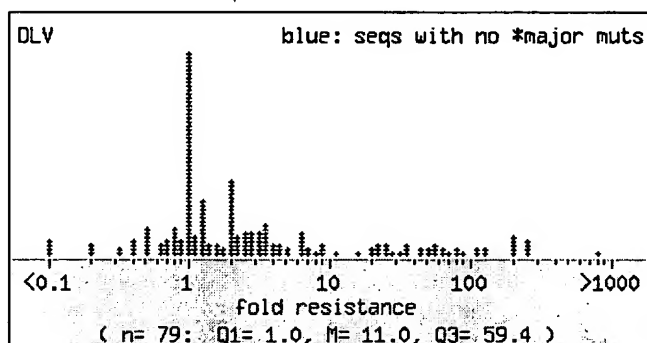
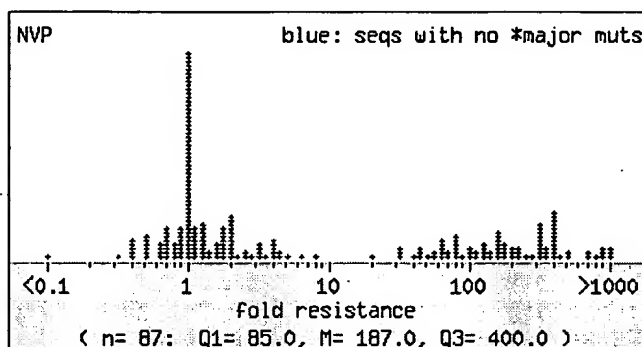
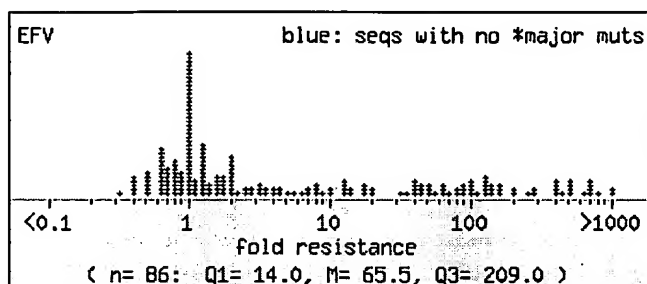
FILE 'MEDLINE' ENTERED AT 11:12:39 ON 05 MAR 2007

L11 173746 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L12 1179 S L11 AND (NNRTI? OR NONNUCLEOSIDE REVERSE TRANSCRIPTASE INHIBI
L13 18 S L12 AND (CODON 190 OR G190A OR G190S)
L14 0 S L13 AND AY<2000
L15 1 S L13 AND PY<2000



Detailed RT Phenotype Query

Mutations	G190A	References	21
Drugs	NVP,DLV,EFV	Isolates	86
Assay	ANY	Results	252
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
<u>Fujiwara (1998)</u>	Lab	NL432-G190A		G190A	K102Q, S162C, K277R	Fujiwara-98	DLV	0.2
						Fujiwara-98	NVP	>70.0
<u>Huang (1999)</u>	Lab	WH101E-108I-190		K101E, V108I, G190A	K102Q, S162C, K277R	Virologic	DLV	>200.0
						Virologic	EFV	270.0
						Virologic	NVP	>680.0
		WH181C_190A		Y181C, G190A	K102Q, S162C, K277R	Virologic	DLV	20.0
						Virologic	EFV	12.0
						Virologic	NVP	>680.0
<u>Petropoulos (2000)</u>	Lab	NL43-nnrti-10		K101E, G190A	K102Q, S162C, K277R	Virologic	DLV	2.0
						Virologic	EFV	123.0
						Virologic	NVP	>500.0
		NL43-nnrti-13		K103N, G190A	K102Q, S162C, K277R	Virologic	DLV	37.0
						Virologic	EFV	213.0
						Virologic	NVP	>500.0
		NL43-nnrti-8		G190A	K102Q, S162C, K277R	Virologic	DLV	0.5
						Virologic	EFV	7.6
						Virologic	NVP	75.0
<u>Winters (2000)</u>	Clinical	MW-q759	D67N, T69., V75I, F77L, F116Y, Q151M, M184V, K219E	Y181C, G190A	S68G	Winters-PBMC	EFV	>500.0
						Winters-PBMC	NVP	>150.0
		q712	D67~, T69G, K70R, T215F, K219E	A98S, K103N, Y181C, G190AG	K20R, K102E, I135T, Q197K, I202VI,	Winters-PBMC	EFV	42.5

					R211K, V245K, A272P			
						Winters- PBMC	NVP	>150.0
		q759	A62V, D67N, T69~, V75I, F77L, Y115F, F116Y, Q151M, M184V, K219E	K101E, Y181C, G190A	V35L, S68G, K122E, I135T, R172K, E203QE, R211K	Winters- PBMC	EFV	>500.0
						Winters- PBMC	NVP	>150.0
<u>Bacheler</u> (2001)	Lab	LB-G190A		G190A	K122E, F214L, A272P, K277R	Virco	DLV	0.2
						Virco	EFV	4.6
						Virco	NVP	41.0
<u>Dunne</u> (2001)	Clinical	ALD-pt812	M41L, E44A, D67N, K70R, V75M, M184V, T215Y	G190A	S3C, E6K, K43E, N54IN, K122E, S162C, E169D, A272P, K277R, V317A	Virologic	DLV	0.0
						Virologic	EFV	1.5
						Virologic	NVP	20.3
<u>Masquelier</u> (2001)	Clinical	BM-19	M41L, T69T_ST, L74VL, L210W, T215Y	K103N, Y181C, G190A	K32RK, R83K, K122E, D123ND, Q207E, R211K, L228H, K238NK	Phenoscript	EFV	>209.0
						Phenoscript	NVP	>2894.0
		BM-21	A62VA, D67E, T69T_ES, L210W, T215Y	K101QK, Y181C, G190A	V21I, V35T, T39AT, D121H, K122E, K173S,	Phenoscript	EFV	43.5

					Q174R, D177E, I178M, G196E, T200I, Q207N, L228H			
						Phenoscript	NVP	>2894.0
		BM-32	M41L, D67G, T69T_T, K70R, L74V, V118I, M184V, T215F, K219Q	K103N, G190A	E42D, K43Q, K64N, D123E, T139R, I142T, T165I, I178MI, I202VI, F214L, L228H	Phenoscript	EFV	>137.0
						Phenoscript	NVP	>1463.0
Beerenwinkel (2002)	Clinical	166-BEC	D67N, K70R, M184V, T215F, K219Q	K103S, V106A, V179I, G190A	V35M, D123E, I135T, S162C, D177X, D186X, T200A, I202X, Q207E, D218E, K238E, Q269X, A272P, T286A	GermanNRC	DLV	56.0
						GermanNRC	EFV	71.0
						GermanNRC	NVP	133.0
		1771-REC	M41W, E44DE, A62X, D67N, T69D, K70X, L74X, F77LF, V118I, L210W, T215Y, K219Q	A98G, K101G, Y181C, G190A	K20R, V21F, V35M, K43X, I50X, P52X, N54X, P55X, Y56N, N57K, T58I, P59X, V60X, I63X, K64R,	GermanNRC	DLV	9.0

					S68RS, R72X, R78X, L80X, T84I, D86N, W88X, I94K, P95Q, H96X, K102X, K122E, D123N, E169D, H198X, E203K, H208Y, R211D, L228H			
						GermanNRC	EFV	122.0
						GermanNRC	NVP	180.0
		1847-FRI	M41L, E44A, D67N, L210W, T215Y, K219E	V106A, G190A	K43E, K49R, R83K, D113ED, D123E, W153M, K154E, G155R, E169D, I178L, G196E, I202MI, R211K, K238*	GermanNRC	DLV	126.0
						GermanNRC	EFV	18.0
						GermanNRC	NVP	200.0
		2070-PAR	M41L, D67X, L74V, M184V, L210W, T215Y, K219E	K101Q, K103R, V179D, Y181C, G190A, M230IM, L234I	K20R, K43E, S48P, I50X, T58I, L80X, K104NK, L109X, D113ED, K122E, K166N, I180V, Y183X, D186X,	GermanNRC	DLV	76.0

					L193FL, R211K, D250X, S251X, N255Y			
						GermanNRC	EFV	62.0
						GermanNRC	NVP	371.0
		2095-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, V108I, G190A	V35I, E40F, K43E, S68G, K122E, S162C, R211K, A272P, K277R, T286P, A288P, L289N	GermanNRC	DLV	35.0
						GermanNRC	EFV	40.0
						GermanNRC	NVP	69.0
		292-MAT	M41L, E44D, T69D, V75M, V118I, L210W, T215S	A98S, Y181C, G190A	P4S, E6D, K20R, K43N, K102Q, K122D, K166R, T200M, Q207E, R211K, E224D, L228R	GermanNRC	DLV	56.0
						GermanNRC	EFV	51.0
						GermanNRC	NVP	314.0
		2942-CODE	D67N, T69X, K70R, L74V, K219Q	K103N, Y181C, G190A	K20R, V35T, T39E, S48T, V60I, D76ED, K102Q, K122E, I135T, N136KN, E138A, K173T, D177E, I178L, T200A,	GermanNRC	DLV	66.0

					K201NK, E204K, Q207A, R211K, F214L, L228H, V245Q, Q269X, A272P			
						GermanNRC	EFV	145.0
						GermanNRC	NVP	219.0
		2944-THA	M41L, D67N, K70X, T215F, K219Q	K103N, Y181C, G190A	V60I, D76N, D86X, K122E, D123K, I135T, N136KN, D177E, T200A, H208QH, D218E	GermanNRC	DLV	91.0
						GermanNRC	EFV	65.0
						GermanNRC	NVP	359.0
		3349-KAH	M41L, E44D, D67N, L74V, V118I, L210W, T215Y, K219G	K103N, Y181C, G190A, M230I	V35T, K43R, F87LF, K122E, I142V, A158X, I159X, K166R, Q174R, D177G, I180M, Q197P, H198P, E203K, R206K, Q207X, H208Y, R211N, T216X, H221X, Y232X	GermanNRC	DLV	190.0
						GermanNRC	EFV	131.0
						GermanNRC	NVP	160.0
		3885-TIM	M41L, D67N, T69D,	A98G, G190A	T58I, V60I, K82R,	GermanNRC	DLV	1.0

			T215Y		R83K, L120S, D123ED, F124X, T128X, T131H, I132X, I135V, N137P, E138X, T139I, R143X, Q145HQ, Y146*Y, W153X, S162C, S163RS, E169D, E194D, H208X			
						GermanNRC	EFV	1.0
						GermanNRC	NVP	56.0
		4463-EIBE	M41L, E44D, D67N, T69D, V118I, L210W, T215Y, K219R	A98G, K103N, G190A	K20R, V35L, D123E, I135T, N137H, Q174X, D177E, I180MI, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H	GermanNRC	DLV	11.0
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P, K277G, Q278H,	GermanNRC	DLV	51.0

					A288P			
						GermanNRC	EFV	47.0
						GermanNRC	NVP	321.0
		5016-DRE	M41L, D67N, K70R, L74I, V75T, T215F, K219Q	K101Q, Y181C, G190A	K20R, K122E, R125G, K126X, Y127C, P133X, I135L, E138D, I142V, Y146*Y, P150X, W153G, I159X, K166X, L168X, E169X, P170X, D177E, G196E, T200A, E203D, F214L, K223Q, L228R, Q242L	GermanNRC	DLV	24.0
						GermanNRC	EFV	90.0
						GermanNRC	NVP	249.0
		5075-STA	M41L, E44D, D67N, T69D, V118I, M184V, L210W, T215Y	K101H, G190A	E6K, Q23X, V35X, K43N, V60I, K122E, I142V, I178F, E203K, Q207E, R211K	GermanNRC	DLV	3.0
						GermanNRC	EFV	89.0
						GermanNRC	NVP	370.0
		5083-FRE	M41L, E44D, D67N, L74V, V118X, M184V, L210W,	K101P, G190A	K13NK, P14X, K20R, V35L, T39X, K43E, R83K,	GermanNRC	DLV	1.0

			T215Y		D121ED, D123ED, I135T, S162D, E169D, D177E, I178M, H208Y, R211K, Q242P, V245X, N255X, L260F, S268X, Q269P			
						GermanNRC	EFV	9.0
						GermanNRC	NVP	175.0
		5306-BRU	M41L, E44A, D67N, V75M, V118I, M184V, L210W, T215Y, K219N	K103N, G190A	K43E, V60I, K122E, I142V, S162D, D177E, I178M, G196E, E203V, Q207E, H208Y, R211K, W212X	GermanNRC	DLV	1.0
						GermanNRC	EFV	36.0
						GermanNRC	NVP	62.0
		5412-BRI	M41L, D67N, L74I, V75T, V118I, L210W, T215Y, K219N	K101Q, K103N, V108I, Y181C, G190A	V35M, T39A, K43E, V60X, K64NK, D123E, K173E, I178L, Q207E, D218E, D237F, K259NK, Q269P, A272P	GermanNRC	DLV	190.0
						GermanNRC	EFV	93.0
						GermanNRC	NVP	335.0
		5902-KAH	M41L, E44DE,	K103N, Y181C,	Q23X, K30X,	GermanNRC	DLV	22.0

			D67N, L74X, V118I, M184V, L210W, T215Y, K219N	G190A	V35T, E36X, K43X, K46Y, I47F, K49I, I50F, V60X, K82NK, V90X, K122E, D123N, I142V, K166R, D177G, H208Y, R211K, V245T, S268I, K275R, K277R			
						GermanNRC	EFV	41.0
						GermanNRC	NVP	78.0
		6447-KRA	M41L, D67N, V75X, V118X, L210W, T215Y, K219R	V179I, G190A	V60I, D86X, V90X, K122E, T139K, P170X, I178M, Q207E, R211K, V245K	GermanNRC	DLV	1.0
						GermanNRC	EFV	8.0
						GermanNRC	NVP	187.0
		6893-SCHW	M41L, L210W, T215Y	A98G, K101E, Y181C, G190A	E28K, V35I, T39A, K43E, H96R, K122E, I142V, R172X, D186X, E203K, H208Y, R211K, L228R, K238E, V245T, E248X,	GermanNRC	DLV	256.0

					K259NK, S268I, Q269P			
						GermanNRC	EFV	162.0
						GermanNRC	NVP	283.0
		7067-BUR	A62V, D67ED, T69S, V75I, M184I, L210W, T215X, K219X	K103S, Y181X, G190A	P4X, T58X, K64X, K66NK, R72SR, K122E, I135MI, I142V, R172K, D185X, D186X, Q197X, H198X, R199G, Q207E, H208X, R211K, K220NK	GermanNRC	DLV	1.0
						GermanNRC	EFV	147.0
						GermanNRC	NVP	407.0
		7557-STE	M41L, V118I, M184V, L210W, T215Y	V106A, G190A, F227X, M230V	K43E, S68G, K122E, D123E, I135T, H198X, R199X, T200A, Q207X, R211NK, T216X, E233X	GermanNRC	DLV	1.0
						GermanNRC	EFV	101.0

The Team

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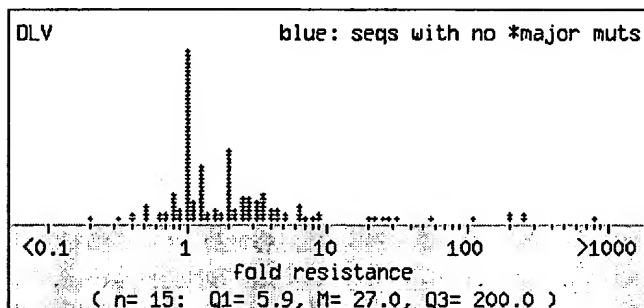
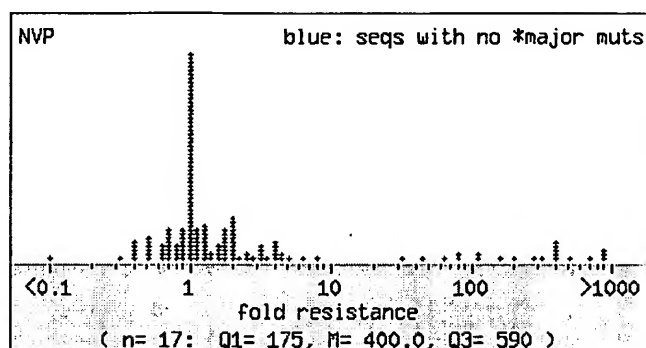
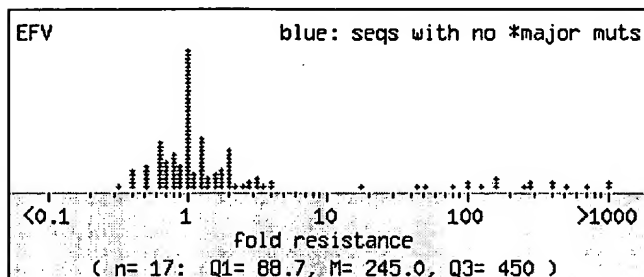
The Data

- [User Guide & Database Documents](#)
- [Database Statistics](#)
- [HIV Treatment Websites](#)
- [Additional Resources](#)



Detailed RT Phenotype Query

Mutations	G190A, K101E	References	11
Drugs	NVP,DLV,EFV	Isolates	16
Assay	ANY	Results	49
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold

<u>Huang (1999)</u>	Lab	WH101E-108I-190		K101E, V108I, G190A	K102Q, S162C, K277R	Virologic	DLV	>200.0
						Virologic	EFV	270.0
						Virologic	NVP	>680.0
<u>Petropoulos (2000)</u>	Lab	NL43-nnrti-10		K101E, G190A	K102Q, S162C, K277R	Virologic	DLV	2.0
						Virologic	EFV	123.0
						Virologic	NVP	>500.0
<u>Winters (2000)</u>	Clinical	q759	A62V, D67N, T69~, V75I, F77L, Y115F, F116Y, Q151M, M184V, K219E	K101E, Y181C, G190A	V35L, S68G, K122E, I135T, R172K, E203QE, R211K	Winters-PBMC	EFV	>500.0
						Winters-PBMC	NVP	>150.0
<u>Beerenwinkel (2002)</u>	Clinical	6893-SCHW	M41L, L210W, T215Y	A98G, K101E, Y181C, G190A	E28K, V35I, T39A, K43E, H96R, K122E, I142V, R172X, D186X, E203K, H208Y, R211K, L228R, K238E, V245T, E248X, K259NK, S268I, Q269P	GermanNRC	DLV	256.0
						GermanNRC	EFV	162.0
						GermanNRC	NVP	283.0
<u>Gonzales (2002)</u>	Clinical	49110-1	D67N, K70R, T215I, K219Q	A98S, K101E, V179I, G190A	K122E, D123E, D177E, I178L, V245E, K277R, T286A,	Virologic	DLV	2.1

					E297K			
						Virologic	EFV	76.0
						Virologic	NVP	>400.0
<u>Margot (2002)</u>	Clinical	MM-5219366841	A62VA, K65R, T69IT, V75AVTI, K219QRK	K101E, V108IV, Y181CY, G190A	V21IV, S68GS, V90IV, K104N, R211K, H221YH, D237N, V245Q, I293VI, A304VA, E328D, A376VA, V381IV, K385RK, K390RK, E399D	Virco	EFV	384.4
						Virco	NVP	32.1
<u>Qari (2002)</u>	Clinical	215566	D67N, T69D, T215Y, K219N	K101E, Y181C, G190A	K122E, I202V, A272P, K277R, Q278E, T286A, E297K, G335D, R356K, M357R, K366R, A376V, T386A, A400T	Virco	DLV	>110.6
						Virco	EFV	283.3
						Virco	NVP	>45.0
						Virologic	DLV	19.7
						Virologic	EFV	101.4
						Virologic	NVP	>893.0
<u>Johnston (2005)</u>	Clinical	71361-1	K65R	A98G, K101E, V179D, G190A	V35T, K49R, K122E, A158S, E169D, R211A, V245M	Virologic	DLV	5.9
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
<u>Mo (2005)</u>	Clinical	8242_d660_Virco	D67N,	A98G,	V35M,	Virco	DLV	192.3

			K70R, T215F, K219Q	K101E, G190A	I135K, E169D, I178F, G196E, H208Y, D237DN, V276T, K281R, T286P, V292I, E297K, A304E, M357T, K366R, A400S			
						Virco	EFV	17.0
						Virco	NVP	84.5
Rhee (2005)	Clinical	CA7736	M41L, D67G, K70R, L74V, T215Y, K219E	K101E, Y181V, G190A	E28A, V60I, S68G, K122E, I135T, I178M	Virologic	DLV	>250.0
						Virologic	EFV	>700.0
						Virologic	NVP	>400.0
Rhee (2006)	Clinical	71361-2	K65R	A98G, K101E, Y181C, G190A	V35T, K49R, K122E, A158S, E169D, R211A, V245M, K277R, T286A, A288S, E297A	Virologic	DLV	>800.0
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
		CA37949	M41L, D67N, T69N, K70R, T215F, K219Q	K101E, Y181C, G190A	K43QK, V60I, K122E, D123N, I135V, D177E, D218E, L228RH, K281R, T286AT, A288SA, I293V	Virologic	DLV	23.0

					Virologic	EFV	105.0
					Virologic	NVP	>200.0
	CA63818	M41L, D67N, T69ATDN, V75L, V118I, L210W, T215Y	A98G, K101E, Y181C, G190A	T39K, K43E, V60IV, I135T, E203D, Q207D, H208YH, R211K, H221YH, L228HL, V245EKQ, A288S	Virologic	DLV	31.0
					Virologic	EFV	400.0
					Virologic	NVP	300.0
	GA-2	D67NH, K70R, M184V, T215F, K219Q	K101E, Y181C, G190A		Virologic	DLV	2.4
					Virologic	EFV	50.0
					Virologic	NVP	>400.0
	SR201325	M41L, T69D, V75M, V118I, L210W, T215Y, K219R	A98G, K101E, Y181C, G190A	E6K, V35M, T39A, K43E, K122E, P170LP, E203K, Q207D, H208Y, R211K, L228H, A272P, I293V, I329L	Virologic	DLV	7.4
					Virologic	EFV	46.0
					Virologic	NVP	>400.0
	SR208661	M41L, A62V, T69D, V75T, L210W, T215Y	K101E, Y181C, G190A	D123E, I135T, I142V, R211K, L228R, A272S, K277R, K281R, I293V, E297K, Q334E	Virologic	DLV	27.0

						Virologic	EFV	245.0
						Virologic	NVP	>400.0

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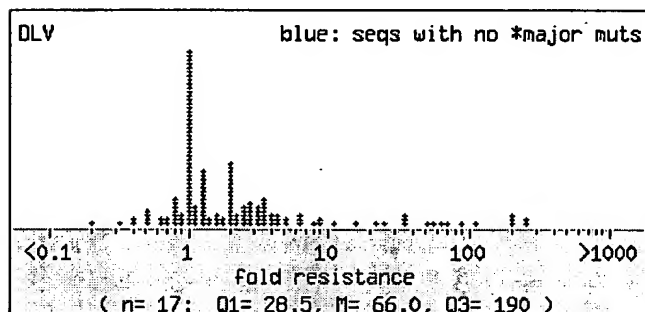
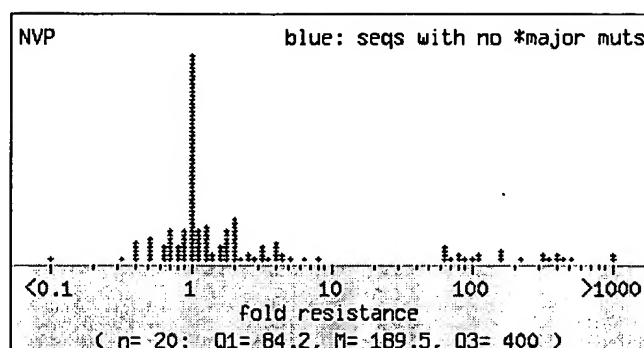
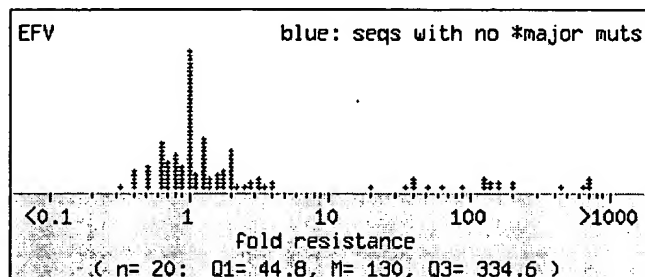
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Detailed RT Phenotype Query

Mutations	G190A, K103N	References	7
Drugs	NVP,DLV,EFV	Isolates	20
Assay	ANY	Results	57
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
-------------	------	----------	------	-------	-------	--------	------	------

<u>Petropoulos</u> (2000)	Lab	NL43-nnrti-13		K103N, G190A	K102Q, S162C, K277R	Virologic	DLV	37.0
						Virologic	EFV	213.0
						Virologic	NVP	>500.0
<u>Winters</u> (2000)	Clinical	q712	D67~, T69G, K70R, T215F, K219E	A98S, K103N, Y181C, G190AG	K20R, K102E, I135T, Q197K, I202VI, R211K, V245K, A272P	Winters- PBMC	EFV	42.5
						Winters- PBMC	NVP	>150.0
<u>Masquelier</u> (2001)	Clinical	BM-19	M41L, T69T_ST, L74VL, L210W, T215Y	K103N, Y181C, G190A	K32RK, R83K, K122E, D123ND, Q207E, R211K, L228H, K238NK	Phenoscript	EFV	>209.0
						Phenoscript	NVP	>2894.0
		BM-32	M41L, D67G, T69T_T, K70R, L74V, V118I, M184V, T215F, K219Q	K103N, G190A	E42D, K43Q, K64N, D123E, T139R, I142T, T165I, I178MI, I202VI, F214L, L228H	Phenoscript	EFV	>137.0
						Phenoscript	NVP	>1463.0
<u>Beerenwinkel</u> (2002)	Clinical	2095-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, V108I, G190A	V35I, E40F, K43E, S68G, K122E, S162C, R211K, A272P, K277R, T286P, A288P, L289N	GermanNRC	DLV	35.0
						GermanNRC	EFV	40.0
						GermanNRC	NVP	69.0

	2942-CODE	D67N, T69X, K70R, L74V, K219Q	K103N, Y181C, G190A	K20R, V35T, T39E, S48T, V60I, D76ED, K102Q, K122E, I135T, N136KN, E138A, K173T, D177E, I178L, T200A, K201NK, E204K, Q207A, R211K, F214L, L228H, V245Q, Q269X, A272P	GermanNRC	DLV	66.0
					GermanNRC	EFV	145.0
					GermanNRC	NVP	219.0
	2944-THA	M41L, D67N, K70X, T215F, K219Q	K103N, Y181C, G190A	V60I, D76N, D86X, K122E, D123K, I135T, N136KN, D177E, T200A, H208QH, D218E	GermanNRC	DLV	91.0
					GermanNRC	EFV	65.0
					GermanNRC	NVP	359.0
	3349-KAH	M41L, E44D, D67N, L74V, V118I, L210W, T215Y, K219G	K103N, Y181C, G190A, M230I	V35T, K43R, F87LF, K122E, I142V, A158X, I159X, K166R, Q174R, D177G, I180M, Q197P,	GermanNRC	DLV	190.0

					H198P, E203K, R206K, Q207X, H208Y, R211N, T216X, H221X, Y232X			
						GermanNRC	EFV	131.0
						GermanNRC	NVP	160.0
		4463-EIBE	M41L, E44D, D67N, T69D, V118I, L210W, T215Y, K219R	A98G, K103N, G190A	K20R, V35L, D123E, I135T, N137H, Q174X, D177E, I180MI, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H	GermanNRC	DLV	11.0
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P, K277G, Q278H, A288P	GermanNRC	DLV	51.0
						GermanNRC	EFV	47.0
						GermanNRC	NVP	321.0
		5306-BRU	M41L, E44A, D67N, V75M, V118I, M184V, L210W,	K103N, G190A	K43E, V60I, K122E, I142V, S162D, D177E, I178M,	GermanNRC	DLV	1.0

		T215Y, K219N		G196E, E203V, Q207E, H208Y, R211K, W212X			
					GermanNRC	EFV	36.0
					GermanNRC	NVP	62.0
	5412-BRI	M41L, D67N, L74I, V75T, V118I, L210W, T215Y, K219N	K101Q, K103N, V108I, Y181C, G190A	V35M, T39A, K43E, V60X, K64NK, D123E, K173E, I178L, Q207E, D218E, D237F, K259NK, Q269P, A272P	GermanNRC	DLV	190.0
					GermanNRC	EFV	93.0
					GermanNRC	NVP	335.0
	5902-KAH	M41L, E44DE, D67N, L74X, V118I, M184V, L210W, T215Y, K219N	K103N, Y181C, G190A	Q23X, K30X, V35T, E36X, K43X, K46Y, I47F, K49I, I50F, V60X, K82NK, V90X, K122E, D123N, I142V, K166R, D177G, H208Y, R211K, V245T, S268I, K275R, K277R	GermanNRC	DLV	22.0
					GermanNRC	EFV	41.0
					GermanNRC	NVP	78.0
	787-BAR	M41L,	K103N,	S68G,	GermanNRC	DLV	110.0

			D67E, L210W, T215Y	G190A	S163X, K166R, G196E, T200A, Q207K, R211E			
						GermanNRC	EFV	123.0
						GermanNRC	NVP	441.0
<u>Gonzales</u> (2002)	Clinical	17468-2	T215Y	K103N, Y181C, G190A	R83K, I135V, E169D, T200A, Q207E, K238N, V245E	Virologic	DLV	>250.0
						Virologic	EFV	>700.0
						Virologic	NVP	>400.0
		17468-4	T215Y	K103N, V108I, Y181C, G190A	R83K, I135V, T139K, E169D, T200A, Q207E, V245Q	Virologic	DLV	>250.0
						Virologic	EFV	>700.0
						Virologic	NVP	>400.0
<u>Margot</u> (2002)	Clinical	MM- 2454367801	M41L, E44A, L74I, M184V, T215Y	K103N, G190A	K43E, R83K, I135L, G196E, T200A, V245M, Q334N, K390R	Virco	DLV	35.5
						Virco	EFV	456.2
						Virco	NVP	90.4
		MM- 3070365661	M41L, E44D, D67N, L210W, T215Y	K103N, G190A	R83K, D123E, I178L, R211K, T286A, E297K, A371V, I375V, A376S, K390R	Virco	DLV	73.1
						Virco	EFV	621.3
						Virco	NVP	63.5
		MM-	M41L,	K103N,	V35IV,	Virco	DLV	195.6

		4262368221	D67N, V75L, L210W, T215Y, K219R	G190A	T39A, K43E, V60I, K102DN, D110ED, D123E, I135T, I142V, S162Y, V189IV, G196EG, E203A, R211K, H221Y, A288S, T290AT, V317A, I329VI, Q334D, G359S, A371T, S379C, K390R			
						Virco	EFV	685.3
						Virco	NVP	103.6
Mo (2005)	Clinical	8371_d105	M184V	K103NK, G190A	V35I, I135T, R211K, V245K, T286A, E297K, K311RK, I326VI, Q334L, T377Q, K390R, K395KN, A400AV	Virco	DLV	16.3
						Virco	EFV	21.3
						Virco	NVP	59.5

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Detailed RT Phenotype Query

Mutations	G190A, K101E, K103N	References	0
		Isolates	0
		Results	0
Drugs	NVP,DLV,EFV		
Assay	ANY		
WithNoOtherMajorMuts	No		

There are no results matching the query



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Detailed RT Phenotype Query

Mutations	G190A, K101E, K103N	References	0
		Isolates	0
		Results	0
Drugs	NVP,DLV,EFV		
Assay	ANY		
WithNoOtherMajorMuts	No		

There are no results matching the query



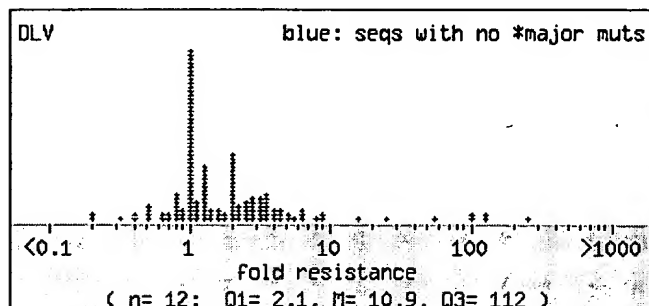
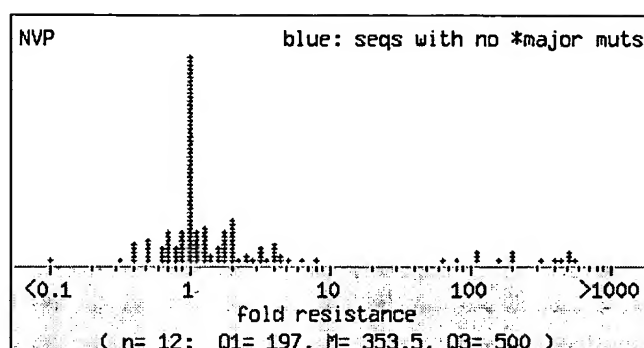
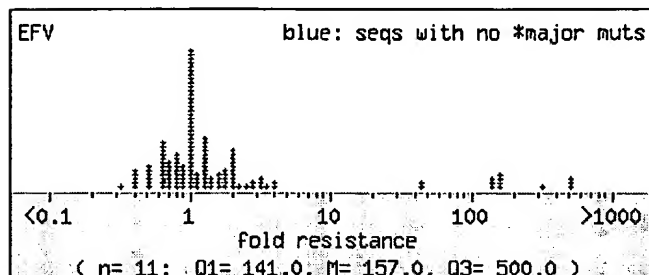
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Detailed RT Phenotype Query

Mutations	G190S, K101E	References	4
Drugs	NVP,DLV,EFV	Isolates	12
Assay	ANY	Results	35
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 35 from Total 35 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
-------------	------	----------	------	-------	-------	--------	------	------

Petropoulos (2000)	Clinical	P644		K101E, G190S		Virologic	DLV	3.0
						Virologic	NVP	580.0
	Lab	NL43-nnrti- 11		K101E, G190S	K102Q, S162C, K277R	Virologic	DLV	1.4
						Virologic	EFV	>500.0
						Virologic	NVP	>500.0
Beerenwinkel (2002)	Clinical	3854-MUE	A62X, L74V, T215Y, K219Q	K101E, Y181R, Y188X, G190S, P226X, P236L	T58X, R83K, D123E, W153A, S156X, P157X, A158Q, I159SR, S162RS, S163X, M164SR, I167F, L168*, E169D, P170X, F171X, R172S, I178L, Y183N, L187Q, D192E, Q207E, H208X	GermanNRC	DLV	95.0
						GermanNRC	EFV	141.0
						GermanNRC	NVP	200.0
		3864- SCHA	M41L, D67N, L210W, T215Y	K101E, K103N, G190S	G18X, I31X, V35I, C38W*C, Y56X, N57KN, T58I, D121Y, K122E, D177E, I178V, G196E, T200I, R211A, P243X	GermanNRC	DLV	16.0
						GermanNRC	EFV	141.0
						GermanNRC	NVP	200.0

	6267-HAS	D67N, K70R, L210X, T215Y, K219E	K101E, Y181C, G190S	V35T, T39S, T58X, V60I, K122E, I135M, R172X, L228H	GermanNRC	DLV	132.0
					GermanNRC	EFV	44.0
					GermanNRC	NVP	169.0
	6663-WER	M41L, E44D, D67N, T69D, L74V, V118I, L210W, T215Y	A98G, K101E, K103NK, V179X, Y181C, G190S	Y56X, F87LF, K122E, S162C, R172K, I180X, Q197HQ, T200A, E203K, Q207E, R211K, T216X, K223Q	GermanNRC	DLV	102.0
					GermanNRC	EFV	157.0
					GermanNRC	NVP	448.0
	7000-HOG	M41L, D67X, T69D, V75A, V118I, L210W, T215Y	A98S, K101ED, G190S	V35I, I37MI, T39X, E40F, K43E, K46NK, K49X, P52X, E53G, R72SR, R83X, L92X, V111I, K122P, I135T, E138A, E169K, K173E, I180F, D186X, G196E, Q197K, H198X, H208F, R211K, Q222P,	GermanNRC	DLV	2.0

					D237ED			
						GermanNRC	EFV	147.0
						GermanNRC	NVP	407.0
		7066-SAM	M41L, D67N, K70R, V75M, T215F, K219E	K101E, G190S	P52X, N54X, P55X, Y56X, N57K, T58I, P59X, V60X, F61LF, I63L, K64R, F87LF, D123E, I180X, G196E, Q197HQ, Q207H, H235P	GermanNRC	DLV	256.0
						GermanNRC	EFV	162.0
						GermanNRC	NVP	194.0
		7134-BON	M41L, D67N, V75M, V118I, Q151X, M184I, L210W, T215F, K219N	K101E, Y181C, G190S	E40F, K43E, K122E, I142V, S162C, D185X, D186N, T200X, H208Y, R211K, D218X, Q222HQ	GermanNRC	DLV	122.0
						GermanNRC	EFV	45.0
						GermanNRC	NVP	114.0
Mo (2005)	Clinical	6333_d283	M41L, D67N, K70R, V75M, M184V, T215F, K219E	K101E, G190S	V60I, D123E, G196E, Q207H, A272P, Q278H, E297K	Virologic	DLV	0.2
						Virologic	EFV	302.0
						Virologic	NVP	512.8
Rhee (2006)	Clinical	NY0528	M41L, D67N, M184V, T215F	K101E, V179I, G190S, M230L	K43Q, K49R, V60I, R83K,	Virologic	DLV	5.7

					D123E, R211K, D237E, A272P, K277K, T286A, I293I, E297K			
						Virologic	EFV	500.0
						Virologic	NVP	300.0
		NY053	E44D, D67d, T69G, K70R, T215I, K219Q	K101E, K103R, G190S	K20R, S68G, R83K, K166R, V245K, A272P	Virologic	DLV	2.2
						Virologic	EFV	500.0
						Virologic	NVP	500.0

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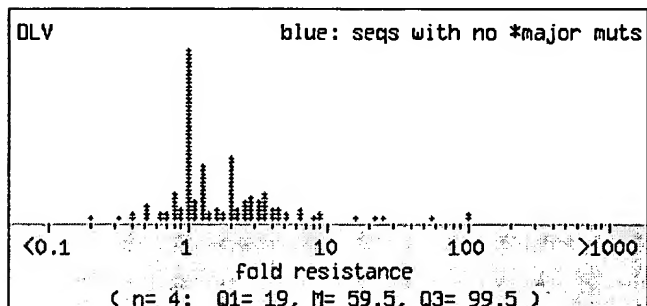
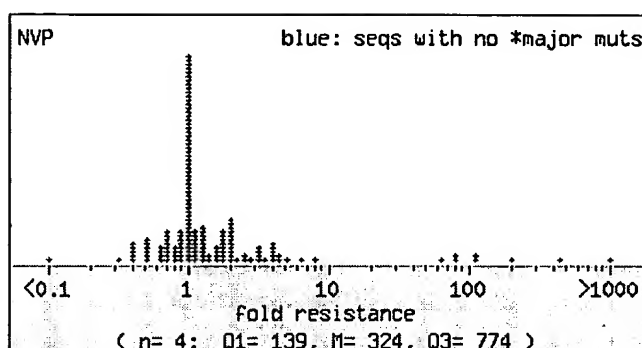
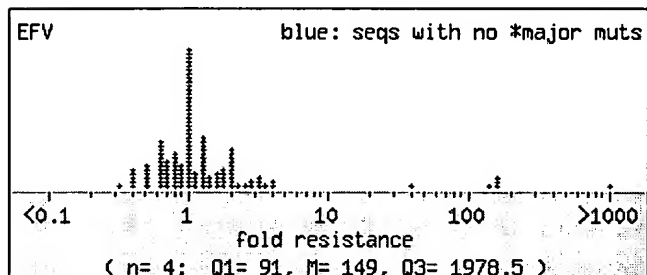
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Detailed RT Phenotype Query

Mutations	G190S, K103N	References	2
Drugs	NVP,DLV,EFV	Isolates	4
Assay	ANY	Results	12
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 12 from Total 12 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold

Bachelor (2001)	Lab	LB- 48T- 103N- 190		K103N, G190S	S48T, K122E, F214L, A272P, K277R	Virco	DLV	97.0
						Virco	EFV	3800.0
						Virco	NVP	1100.0
Beerenwinkel (2002)	Clinical	3864- SCHA	M41L, D67N, L210W, T215Y	K101E, K103N, G190S	G18X, I31X, V35I, C38W*C, Y56X, N57KN, T58I, D121Y, K122E, D177E, I178V, G196E, T200I, R211A, P243X	GermanNRC	DLV	16.0
						GermanNRC	EFV	141.0
						GermanNRC	NVP	200.0
		5803- SCH	M41L, A62V, D67N, K70X, L74MI, V75T, T215Y	K101R, K103N, G190S	Q23X, V60X, K64NK, S68X, R72X, D76N, R78X, E79X, R83K, D123E, D177E, I178L, I202V, Q207R, R211S, D237E	GermanNRC	DLV	22.0
						GermanNRC	EFV	41.0
						GermanNRC	NVP	78.0
		6663- WER	M41L, E44D, D67N, T69D, L74V, V118I, L210W, T215Y	A98G, K101E, K103NK, V179X, Y181C, G190S	Y56X, F87LF, K122E, S162C, R172K, I180X, Q197HQ, T200A,	GermanNRC	DLV	102.0

					E203K, Q207E, R211K, T216X, K223Q			
						GermanNRC	EFV	157.0
						GermanNRC	NVP	448.0

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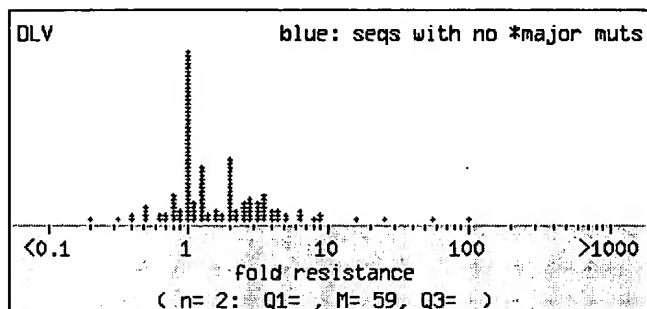
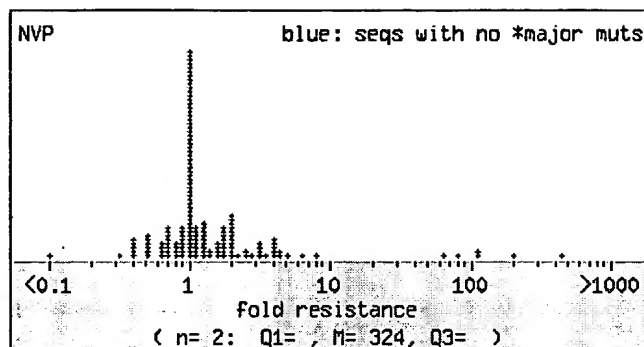
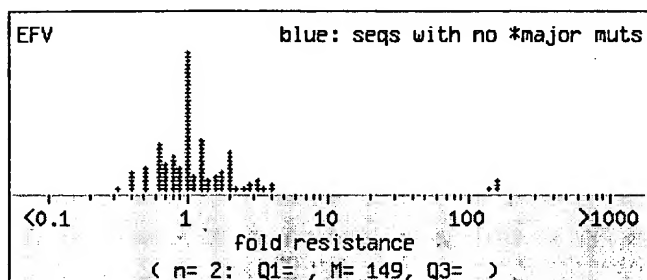
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Detailed RT Phenotype Query

Mutations	G190S, K101E, K103N	References	1
Drugs	NVP,DLV,EFV	Isolates	2
Assay	ANY	Results	6
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
-------------	------	----------	------	-------	-------	--------	------	------

Beerenwinkel (2002)	Clinical	3864- SCHA	M41L, D67N, L210W, T215Y	K101E, K103N, G190S	G18X, I31X, V35I, C38W*C, Y56X, N57KN, T58I, D121Y, K122E, D177E, I178V, G196E, T200I, R211A, P243X	GermanNRC	DLV	16.0
						GermanNRC	EFV	141.0
						GermanNRC	NVP	200.0
		6663- WER	M41L, E44D, D67N, T69D, L74V, V118I, L210W, T215Y	A98G, K101E, K103NK, V179X, Y181C, G190S	Y56X, F87LF, K122E, S162C, R172K, I180X, Q197HQ, T200A, E203K, Q207E, R211K, T216X, K223Q	GermanNRC	DLV	102.0
						GermanNRC	EFV	157.0
						GermanNRC	NVP	448.0

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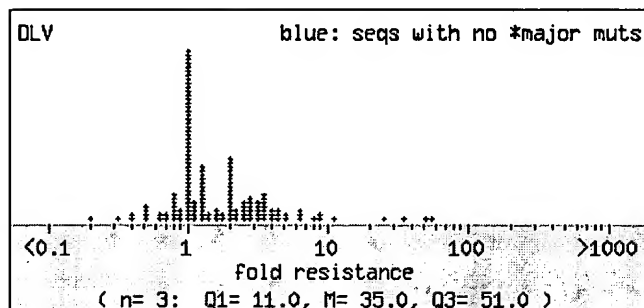
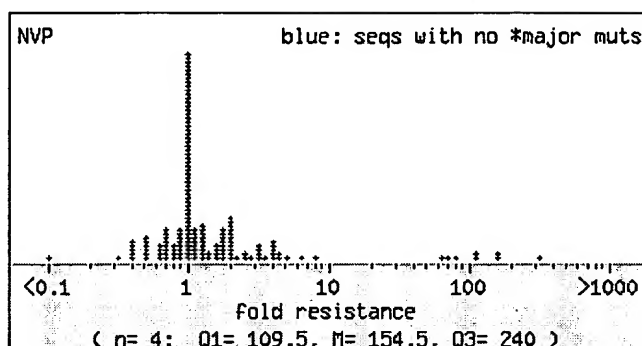
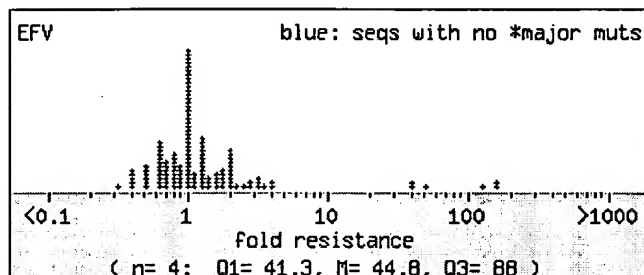
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Detailed RT Phenotype Query

Mutations	G190A, K103N, A98	References	2
Drugs	NVP,DLV,EFV	Isolates	4
Assay	ANY	Results	11
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 11 from Total 11 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold

Winters (2000)	Clinical	q712	D67~, T69G, K70R, T215F, K219E	A98S, K103N, Y181C, G190AG	K20R, K102E, I135T, Q197K, I202VI, R211K, V245K, A272P	Winters- PBMC	EFV	42.5
						Winters- PBMC	NVP	>150.0
Beerenwinkel (2002)	Clinical	2095- LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, V108I, G190A	V35I, E40F, K43E, S68G, K122E, S162C, R211K, A272P, K277R, T286P, A288P, L289N	GermanNRC	DLV	35.0
						GermanNRC	EFV	40.0
						GermanNRC	NVP	69.0
		4463- EIBE	M41L, E44D, D67N, T69D, V118I, L210W, T215Y, K219R	A98G, K103N, G190A	K20R, V35L, D123E, I135T, N137H, Q174X, D177E, I180MI, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H	GermanNRC	DLV	11.0
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936- LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P,	GermanNRC	DLV	51.0

			K277G, Q278H, A288P			
				GermanNRC	EFV	47.0
				GermanNRC	NVP	321.0

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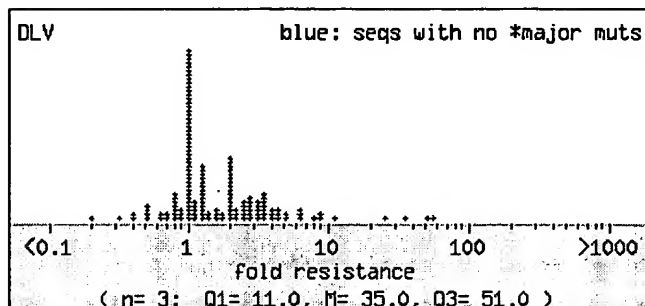
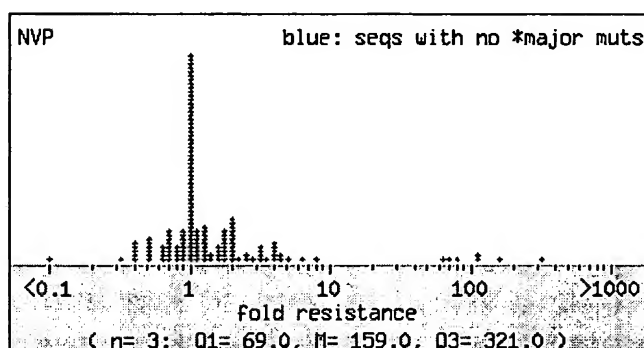
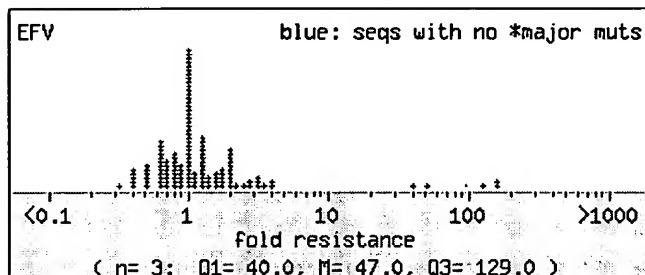
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Detailed RT Phenotype Query

Mutations	G190A, K103N, A98G	References	1
Drugs	NVP,DLV,EFV	Isolates	3
Assay	ANY	Results	9
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold

Beerenwinkel (2002)	Clinical	2095-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, V108I, G190A	V35I, E40F, K43E, S68G, K122E, S162C, R211K, A272P, K277R, T286P, A288P, L289N	GermanNRC	DLV	35.0
						GermanNRC	EFV	40.0
						GermanNRC	NVP	69.0
		4463-EIBE	M41L, E44D, D67N, T69D, V118I, L210W, T215Y, K219R	A98G, K103N, G190A	K20R, V35L, D123E, I135T, N137H, Q174X, D177E, I180MI, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H	GermanNRC	DLV	11.0
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P, K277G, Q278H, A288P	GermanNRC	DLV	51.0
						GermanNRC	EFV	47.0
						GermanNRC	NVP	321.0

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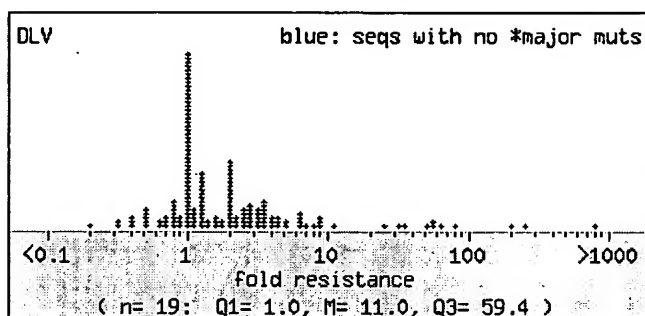
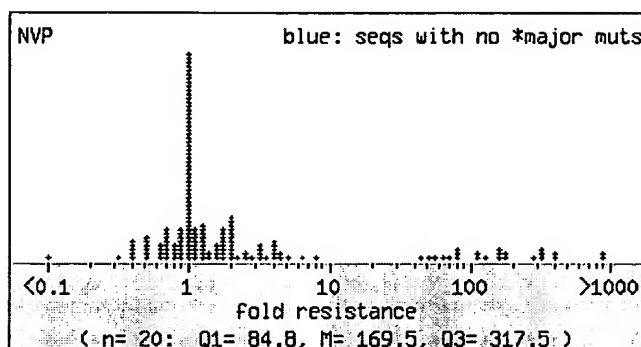
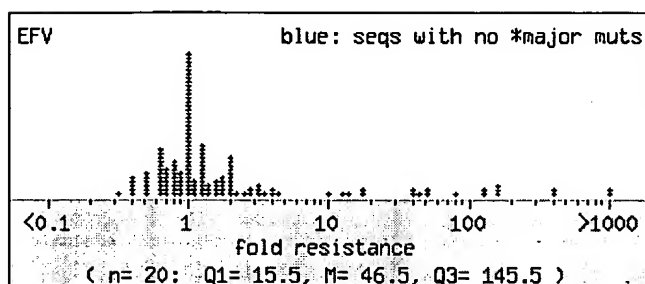
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Detailed RT Phenotype Query

Mutations	G190A, A98	References	7
Drugs	NVP,DLV,EFV	Isolates	20
Assay	ANY	Results	59
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 59 from Total 59 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
Winters	Clinical	q712	D67~,	A98S,	K20R,	Winters-	EFV	42.5

(2000)			T69G, K70R, T215F, K219E	K103N, Y181C, G190AG	K102E, I135T, Q197K, I202VI, R211K, V245K, A272P	PBMC		
						Winters- PBMC	NVP	>150.0
Beerenwinkel (2002)	Clinical	1771-REC	M41W, E44DE, A62X, D67N, T69D, K70X, L74X, F77LF, V118I, L210W, T215Y, K219Q	A98G, K101G, Y181C, G190A	K20R, V21F, V35M, K43X, I50X, P52X, N54X, P55X, Y56N, N57K, T58I, P59X, V60X, I63X, K64R, S68RS, R72X, R78X, L80X, T84I, D86N, W88X, I94K, P95Q, H96X, K102X, K122E, D123N, E169D, H198X, E203K, H208Y, R211D, L228H	GermanNRC	DLV	9.0
						GermanNRC	EFV	122.0
						GermanNRC	NVP	180.0
		2095-LAN	M41L, L74I, V118I, M184V, L210W, T215Y,	A98G, K103N, V108I, G190A	V35I, E40F, K43E, S68G, K122E, S162C,	GermanNRC	DLV	35.0

		K219N		R211K, A272P, K277R, T286P, A288P, L289N			
					GermanNRC	EFV	40.0
					GermanNRC	NVP	69.0
	292-MAT	M41L, E44D, T69D, V75M, V118I, L210W, T215S	A98S, Y181C, G190A	P4S, E6D, K20R, K43N, K102Q, K122D, K166R, T200M, Q207E, R211K, E224D, L228R	GermanNRC	DLV	56.0
					GermanNRC	EFV	51.0
					GermanNRC	NVP	314.0
	3885-TIM	M41L, D67N, T69D, T215Y	A98G, G190A	T58I, V60I, K82R, R83K, L120S, D123ED, F124X, T128X, T131H, I132X, I135V, N137P, E138X, T139I, R143X, Q145HQ, Y146*Y, W153X, S162C, S163RS, E169D, E194D, H208X	GermanNRC	DLV	1.0
					GermanNRC	EFV	1.0
					GermanNRC	NVP	56.0
	4463-EIBE	M41L, E44D, D67N, T69D,	A98G, K103N, G190A	K20R, V35L, D123E, I135T,	GermanNRC	DLV	11.0

			V118I, L210W, T215Y, K219R		N137H, Q174X, D177E, I180M, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H			
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P, K277G, Q278H, A288P	GermanNRC	DLV	51.0
						GermanNRC	EFV	47.0
						GermanNRC	NVP	321.0
		6893-SCHW	M41L, L210W, T215Y	A98G, K101E, Y181C, G190A	E28K, V35I, T39A, K43E, H96R, K122E, I142V, R172X, D186X, E203K, H208Y, R211K, L228R, K238E, V245T, E248X, K259NK, S268I, Q269P	GermanNRC	DLV	256.0
						GermanNRC	EFV	162.0
						GermanNRC	NVP	283.0
Gonzales	Clinical	49110-1	D67N,	A98S,	K122E,	Virologic	DLV	2.1

(2002)			K70R, T215I, K219Q	K101E, V179I, G190A	D123E, D177E, I178L, V245E, K277R, T286A, E297K			
						Virologic	EFV	76.0
						Virologic	NVP	>400.0
		49110-3	D67N, K70R, T215F, K219Q	A98S, V179I, G190A	K122E, D123E, D177E, I178L, V245E, K277R, T286A, E297K, K311R	Virologic	DLV	0.4
						Virologic	EFV	4.3
						Virologic	NVP	85.0
Margot (2002)	Clinical	MM-3576366701	M41L, M184V, T215FY	A98S, K101DEHQ, G190A	D121Y, I135VI, I142VI, D177E, Q207E, R211K, D237E, T286A, M357T, R358KR, T377Q, T386AVTI, K395R, E399D, A400TA	Virco	DLV	59.4
						Virco	EFV	398.4
						Virco	NVP	49.5
		MM-4346366641	M41L, E44D, M184V, T215Y	A98G, V179I, G190A	K20R, K102Q, D123E, I135M, Q207E, T286A, E297K, I329LI, A360T, V365IV	Virco	DLV	0.3
						Virco	EFV	18.0
						Virco	NVP	121.9
Johnston	Clinical	71361-1	K65R	A98G,	V35T,	Virologic	DLV	5.9

(2005)				K101E, V179D, G190A	K49R, K122E, A158S, E169D, R211A, V245M			
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
Mo (2005)	Clinical	8242_d660_Virco	D67N, K70R, T215F, K219Q	A98G, K101E, G190A	V35M, I135K, E169D, I178F, G196E, H208Y, D237DN, V276T, K281R, T286P, V292I, E297K, A304E, M357T, K366R, A400S	Virco	DLV	192.3
						Virco	EFV	17.0
						Virco	NVP	84.5
		8315_d867	M184V	A98S, G190A	K43E, K122E, I142V, E203K, R211RS, V245T, E297K	Virologic	DLV	0.7
						Virologic	EFV	14.0
						Virologic	NVP	182.0
		8315_d985	M184V	A98S, G190A	K43E, K122E, I142V, E203K, R211S, V245T, E297KR	Virologic	DLV	0.5
						Virologic	EFV	9.5
						Virologic	NVP	156.0
		8371_d286		A98SA, G190A	V35I, I135T, V189VI, R211K, V245K, T286A,	Virco	DLV	76.8

					E297K, I326V, Q334L, T377Q, K390R, A400AV			
						Virco	EFV	13.2
						Virco	NVP	42.9
Rhee (2006)	Clinical	71361-2	K65R	A98G, K101E, Y181C, G190A	V35T, K49R, K122E, A158S, E169D, R211A, V245M, K277R, T286A, A288S, E297A	Virologic	DLV	>800.0
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
		CA63818	M41L, D67N, T69ATDN, V75L, V118I, L210W, T215Y	A98G, K101E, Y181C, G190A	T39K, K43E, V60IV, I135T, E203D, Q207D, H208YH, R211K, H221YH, L228HL, V245EKQ, A288S	Virologic	DLV	31.0
						Virologic	EFV	400.0
						Virologic	NVP	300.0
		SR201325	M41L, T69D, V75M, V118I, L210W, T215Y, K219R	A98G, K101E, Y181C, G190A	E6K, V35M, T39A, K43E, K122E, P170LP, E203K, Q207D, H208Y, R211K, L228H, A272P, I293V, I329L	Virologic	DLV	7.4
						Virologic	EFV	46.0

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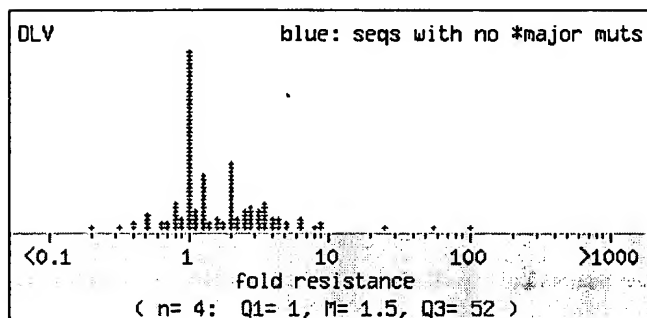
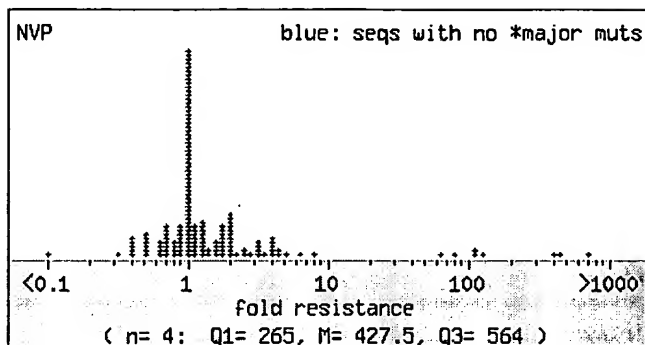
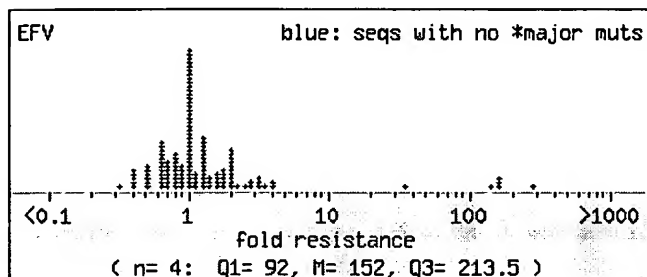
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Detailed RT Phenotype Query

Mutations	G190S, A98	References	2
Drugs	NVP,DLV,EFV	Isolates	4
Assay	ANY	Results	12
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 12 from Total 12 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
Huang	Lab	WH-		A98G,	K102Q,	Virologic	DLV	1.0

(1999)		98G-190S		G190S	S162C, K277R			
						Virologic	EFV	>270.0
						Virologic	NVP	>680.0
Beerenwinkel (2002)	Clinical	4848-MAR	D67N, K70R, M184V, K219E	A98R, L100V, G190S	T58X, V60I, F87X, V90X, Q91E, L92X, P95X, G99X, Y127X, S162H, T200A, E203K, Q207E, R211K, K249NK	GermanNRC	DLV	1.0
						GermanNRC	EFV	37.0
						GermanNRC	NVP	123.0
		6663-WER	M41L, E44D, D67N, T69D, L74V, V118I, L210W, T215Y	A98G, K101E, K103NK, V179X, Y181C, G190S	Y56X, F87LF, K122E, S162C, R172K, I180X, Q197HQ, T200A, E203K, Q207E, R211K, T216X, K223Q	GermanNRC	DLV	102.0
						GermanNRC	EFV	157.0
						GermanNRC	NVP	448.0
		7000-HOG	M41L, D67X, T69D, V75A, V118I, L210W, T215Y	A98S, K101ED, G190S	V35I, I37MI, T39X, E40F, K43E, K46NK, K49X, P52X, E53G, R72SR, R83X, L92X, V111I, K122P,	GermanNRC	DLV	2.0

					I135T, E138A, E169K, K173E, I180F, D186X, G196E, Q197K, H198X, H208F, R211K, Q222P, D237ED			
						GermanNRC	EFV	147.0
						GermanNRC	NVP	407.0

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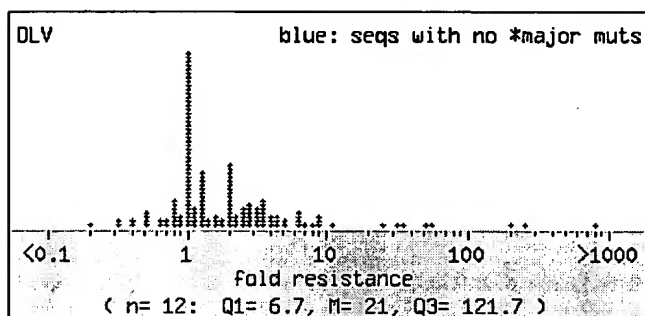
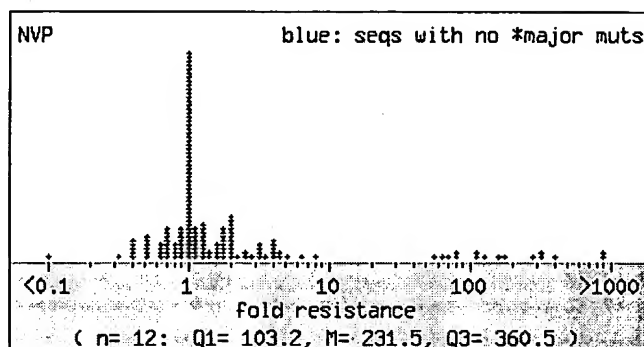
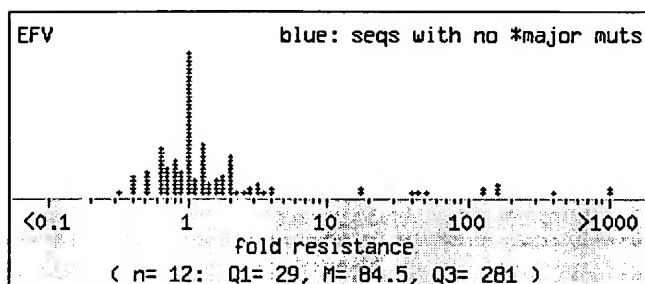
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Drugs	NVP,DLV,EFV	Isolates	12
Assay	ANY	Results	36
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
Beerenwinkel	Clinical	1771-REC	M41W,	A98G,	K20R,	GermanNRC	DLV	9.0

(2002)

E44DE,
A62X,
D67N,
T69D,
K70X,
L74X,
F77LF,
V118I,
L210W,
T215Y,
K219Q

K101G, V21F,
Y181C, V35M,
G190A, K43X,
I50X,
P52X,
N54X,
P55X,
Y56N,
N57K,
T58I,
P59X,
V60X,
I63X,
K64R,
S68RS,
R72X,
R78X,
L80X,
T84I,
D86N,
W88X,
I94K,
P95Q,
H96X,
K102X,
K122E,
D123N,
E169D,
H198X,
E203K,
H208Y,
R211D,
L228H

GermanNRC EFV 122.0

GermanNRC NVP 180.0

2095-LAN

M41L,
L74I,
V118I,
M184V,
L210W,
T215Y,
K219N

A98G,
K103N,
V108I,
G190A

V35I,
E40F,
K43E,
S68G,
K122E,
S162C,
R211K,
A272P,
K277R,
T286P,
A288P,
L289N

GermanNRC DLV 35.0

GermanNRC EFV 40.0

GermanNRC NVP 69.0

GermanNRC DLV 1.0

3885-TIM

M41L,
D67N,

A98G, T58I,
G190A V60I,

			T69D, T215Y		K82R, R83K, L120S, D123ED, F124X, T128X, T131H, I132X, I135V, N137P, E138X, T139I, R143X, Q145HQ, Y146*Y, W153X, S162C, S163RS, E169D, E194D, H208X			
						GermanNRC	EFV	1.0
						GermanNRC	NVP	56.0
		4463-EIBE	M41L, E44D, D67N, T69D, V118I, L210W, T215Y, K219R	A98G, K103N, G190A	K20R, V35L, D123E, I135T, N137H, Q174X, D177E, I180MI, L193FL, E203D, R206X, H208Y, R211D, K223Q, L228H	GermanNRC	DLV	11.0
						GermanNRC	EFV	129.0
						GermanNRC	NVP	159.0
		4936-LAN	M41L, L74I, V118I, M184V, L210W, T215Y, K219N	A98G, K103N, G190A	V35I, E40F, K43E, S68G, K122E, S162C, T200I, R211K, Q269X, A272P, K277G,	GermanNRC	DLV	51.0

					Q278H, A288P			
						GermanNRC	EFV	47.0
						GermanNRC	NVP	321.0
		6893-SCHW	M41L, L210W, T215Y	A98G, K101E, Y181C, G190A	E28K, V35I, T39A, K43E, H96R, K122E, I142V, R172X, D186X, E203K, H208Y, R211K, L228R, K238E, V245T, E248X, K259NK, S268I, Q269P	GermanNRC	DLV	256.0
						GermanNRC	EFV	162.0
						GermanNRC	NVP	283.0
<u>Margot</u> (2002)	Clinical	MM-4346366641	M41L, E44D, M184V, T215Y	A98G, V179I, G190A	K20R, K102Q, D123E, I135M, Q207E, T286A, E297K, I329LI, A360T, V365IV	Virco	DLV	0.3
						Virco	EFV	18.0
						Virco	NVP	121.9
<u>Johnston</u> (2005)	Clinical	71361-1	K65R	A98G, K101E, V179D, G190A	V35T, K49R, K122E, A158S, E169D, R211A, V245M	Virologic	DLV	5.9
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
<u>Mo (2005)</u>	Clinical	8242_d660_Virco	D67N, K70R, T215F, K219Q	A98G, K101E, G190A	V35M, I135K, E169D, I178F,	Virco	DLV	192.3

					G196E, H208Y, D237DN, V276T, K281R, T286P, V292I, E297K, A304E, M357T, K366R, A400S			
						Virco	EFV	17.0
						Virco	NVP	84.5
Rhee (2006)	Clinical	71361-2	K65R	A98G, K101E, Y181C, G190A	V35T, K49R, K122E, A158S, E169D, R211A, V245M, K277R, T286A, A288S, E297A	Virologic	DLV	>800.0
						Virologic	EFV	>1500.0
						Virologic	NVP	>893.0
		CA63818	M41L, D67N, T69ATDN, V75L, V118I, L210W, T215Y	A98G, K101E, Y181C, G190A	T39K, K43E, V60IV, I135T, E203D, Q207D, H208YH, R211K, H221YH, L228HL, V245EKQ, A288S	Virologic	DLV	31.0
						Virologic	EFV	400.0
						Virologic	NVP	300.0
		SR201325	M41L, T69D, V75M, V118I, L210W, T215Y, K219R	A98G, K101E, Y181C, G190A	E6K, V35M, T39A, K43E, K122E, P170LP, E203K, Q207D, H208Y,	Virologic	DLV	7.4

					R211K, L228H, A272P, I293V, I329L		
						Virologic	EFV 46.0
						Virologic	NVP >400.0

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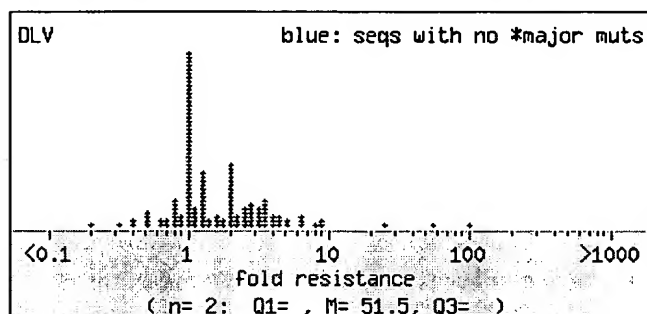
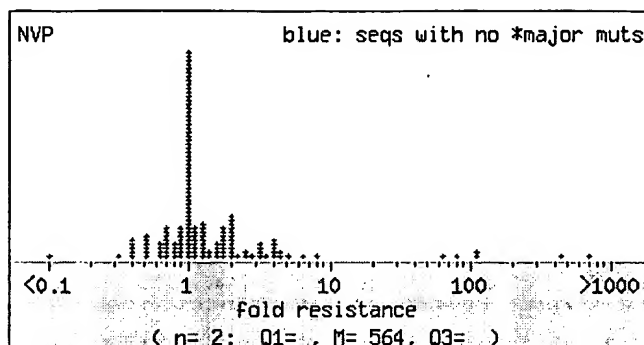
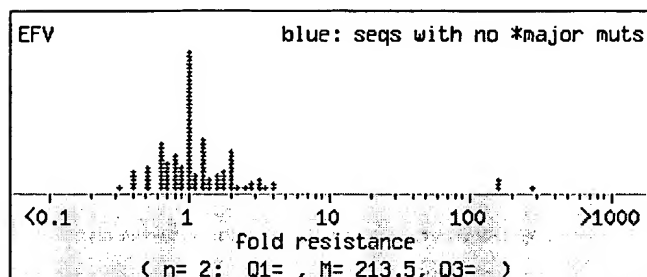
STANFORD UNIVERSITY

HIV DRUG RESISTANCE DATABASE*A curated public database designed to represent, store, and analyze the divergent forms of data underlying HIV drug resistance.*

HOME GENOTYPE-RX GENOTYPE-PHENO GENOTYPE-CLINICAL HIVdb PROGRAM

Detailed RT Phenotype Query

Mutations	G190S, A98G.	References	2
Drugs	NVP,DLV,EFV	Isolates	2
Assay	ANY	Results	6
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 41, 44, 62, 65, 67, 69, 70, 74, 75, 77, 115, 116, 118, 151, 184, 210, 215, 219, 333, 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225, 226, 227, 230, 234, 236, 238, 318) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Results 1 to Result 6 from Total 6 Phenotype results

Author (yr)	Type	Isolates	NRTI	NNRTI	Other	Method	Drug	Fold
Huang	Lab	WH-		A98G,	K102Q,	Virologic	DLV	1.0

(1999)		98G-190S		G190S	S162C, K277R			
						Virologic	EFV	>270.0
						Virologic	NVP	>680.0
<u>Beerenwinkel (2002)</u>	Clinical	6663-WER	M41L, E44D, D67N, T69D, L74V, V118I, L210W, T215Y	A98G, K101E, K103NK, V179X, Y181C, G190S	Y56X, F87LF, K122E, S162C, R172K, I180X, Q197HQ, T200A, E203K, Q207E, R211K, T216X, K223Q	GermanNRC	DLV	102.0
						GermanNRC	EFV	157.0
						GermanNRC	NVP	448.0

The Team

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- Publications
- Acknowledgements

The Data

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- Additional Resources